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| APPLICATION NO.                                             | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.  | CONFIRMATION NO. |
|-------------------------------------------------------------|-------------|----------------------|----------------------|------------------|
| 09/685,905                                                  | 10/10/2000  | Yunzhou Li           | 10360/075001/12335BA | 4628             |
| 26161                                                       | 7590        | 02/02/2004           | EXAMINER             |                  |
| FISH & RICHARDSON PC<br>225 FRANKLIN ST<br>BOSTON, MA 02110 |             |                      | LEZAK, ARRIENNE M    |                  |
|                                                             |             |                      | ART UNIT             | PAPER NUMBER     |
|                                                             |             |                      | 2143                 | 5                |

DATE MAILED: 02/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/685,905

Applicant(s)

LI, YUNZHOU

Examiner

Arrienn M. Lezak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other:

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-36 rejected under 35 U.S.C. 102(b) as being anticipated by US Patent 5,903,559 to Acharya.
3. Regarding Claims 1, 8, 15, 16, 17, 21 and 25, Acharya discloses a method, a machine-readable medium and a router for purposes of multicasting data to at least one line card configured to attach to a router; and storing state information associated with the data as a default state at each line card the data was multicast to, (Fig. 8; Col. 7, lines 16-41; Col. 14, lines 46-67; Col. 15, lines 1-29; and Col. 16, lines 21-27).
4. Regarding Claims 2, 9, 18 and 23, Acharya discloses a method wherein state information includes the source parameter indicating a source of the data, (Col. 10, lines 42-49 and Col. 14, lines 39-45).
5. Regarding Claims 3, 10, 19 and 24, Acharya discloses a method wherein the state information includes a group parameter indicating at least one destination of the data, (Col. 10, lines 42-49; Col. 14, lines 39-45; and Col. 18, lines 55-58).
6. Regarding Claims 4 and 11, Acharya discloses a method comprising performing a reverse path forwarding check on the data, (Col. 16, lines 8-27 and Col. 24, lines 43-58).

7. Regarding Claims 5, 7, 12 and 14, Acharya discloses a method wherein performing and verifying is done using a multicast border gateway protocol, (Col. 24, lines 43-58).

8. Regarding Claims 6, 13 and 31, Acharya discloses a method comprising verifying that the data, including known state information, was received at the proper line card, (Col. 18, lines 42-67 and Col. 19, lines 1-19).

9. Regarding Claims 20, 22 and 30, Acharya discloses a method comprising: receiving multicast data including known and unknown state information, (Fig. 8; Col. 14, lines 46-67 and Col. 15, lines 1-29); storing the multicast data with default state information, (Col. 7, lines 16-41 and Col. 16, lines 21-27); performing a reverse path forwarding check on the multicast data, (Col. 16, lines 8-27 and Col. 24, lines 43-58); verifying that the multicast data was received at a proper interface, (Col. 18, lines 42-67 and Col. 19, lines 1-19); determining a multicast group associated with the multicast data; and routing or multicasting the multicast data to the multicast group or all available interfaces, (Col. 22, lines 26-67).

10. Regarding Claims 32 and 33, Acharya discloses multicasting data including known state information according to the known state information if the multicast data including known state information is verified, (pending Claim 32), and dropping the multicast data including known state information if the multicast data including known state information is not verified, (pending Claim 33), (Col. 14, lines 46-67 and Col. 15, lines 1-29).

11. Regarding Claim 26, Acharya discloses a method wherein a data path associated with a router and configured to process multicast data executes the performing and verifying, (Col. 8, lines 52 –61; Col. 10, lines 42-49; Col. 22, lines 58-67; and Col. 23, lines 36-51).

12. Regarding Claim 27, Acharya discloses a method wherein the data path uses a multicast border gateway protocol in executing the performing and the verifying, (Col. 24, lines 43-59).

13. Regarding Claim 28, Acharya discloses a method wherein the processor included in a router and configured to process multicast data executes the determining, (Fig.11 and Col. 19, lines 20-26).

14. Regarding Claim 29, Acharya discloses a method comprising trimming routes to paths not associated with multicast groups, (Col. 14, lines 46-67 and Col. 15, lines 1-29).

15. Regarding Claim 34, Acharya discloses a method comprising: installing a default state associated with multicast data in a data path of a line card, (Col. 14, lines 46-67 and Col. 15, lines 1-29); broadcasting the multicast data from the line card to all other line cards that the line card is configured to communicate with, (Col. 22, lines 26-67); sending the multicast data from the data path to a control path of the line card, (Col. 22, lines 58-67); at the control path, computing a route for the multicast data, (Col. 23, lines 20-35); and designating the line cards not included in the computed route as not to be broadcast multicast data received at the data path subsequent to the multicast data and

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having the same state information as the multicast data, (Col. 14, lines 46-67 and Col. 15, lines 1-29).

16. Regarding Claim 35, Acharya discloses a method comprising performing at the data path a reverse path forwarding check on the multicast data using a multicast gateway border protocol, (Col. 16, lines 8-27 and Col. 24, lines 43-58).

17. Regarding Claim 36, Acharya discloses a method comprising prior to the installing, checking state information associated with the multicast data with a multicast border gateway protocol to verify that the line card received the multicast data from a proper source, (Col. 18, lines 42-67; Col. 19, lines 1-19; Col. 22, lines 26-67; and Col. 24, lines 43-58).

18. Therefore, this reference may reasonably be read to teach or describe every element or claim limitation of Claims 1-36.

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US Patent US 6,260,073 B1 to Walker;

US Patent 6,104,870 to Frick;

US Patent 5,991,292 to Focsaneanu; and

US Patent Pub. US 2003/0165140 A1 to Tang.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arrienne M. Lezak whose telephone number is (703)-305-0717. The examiner can normally be reached on M-F 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (703)-308-5221. The fax phone number for the organization where this application or proceeding is assigned is (703)-305-3718.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-6121.

Arrienne M. Lezak  
Examiner  
Art Unit 2143

AML



**DAVID WILEY**  
**SUPERVISORY PATENT EXAMINER**  
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